

ParaWalk : Go forward Go Green

ParaWalk is an extremely high hardness material made from natural rubber (NR) for home and garden decoration, an innovation for sustainable agriculture.



Unlike most hard materials, ParaWalk can absorb and dissipate impact energy more than 70% providing enhanced safety particularly in the areas with a risk of slips or falls. It can be fitted or installed in various areas in a similar manner to wood or ceramic tiles. Lower moisture absorption and greater resistance from wood-consuming insects such as moths and termites are the main advantages over traditional woods. Compared with ceramic tiles, ParaWalk is tougher and can be easily cut or trimmed.

Product description

Thailand is the world's largest rubber producer and exporter but most Thai rubber production goes to exports of low value-added raw or semi-processed rubber. The Thai rubber

industry therefore faces a big challenge of upgrading or raising value added efficiently based on innovation for sustainable economic growth.

Generally, the development of rubber product from dry rubber mainly focuses on quality improvement of engineering products such as tire, engine mount, etc. Little attention is given to the application of rubber in home and garden decoration. As the market of decorative materials has expanded rapidly, the driving of NR products into this market not only increases domestic NR consumption, but also creates added value for NR.

When we talk about “rubber”, most people will think of a soft and flexible material. The development of ParaWalk is initiated from the idea to erase such thought or feeling, but still remains some unique properties of NR, for example, viscoelastic behavior and high insulation. The viscoelastic behavior of ParaWalk helps dissipate impact energy (>70%). It is an extremely hard material with hardness in the range of 90-95 Shore A (50-70 Shore D), density of 1.3-1.7 g/cm³, low coefficient of thermal expansion and low moisture absorption (less than 6% swelling when soaked in water at 70°C for 7 days). It can be sawed, punched, lathed and planed by using woodturning tools. In addition, it can also be bent (when heated), painted, coated or varnished, pattern inlaid and odor adjusted. ParaWalk is a termite-resistant material with very low content of hazardous volatile organic compound.

ParaWalk is manufactured through a common rubber production process, i.e., mixing, shaping, vulcanization and trimming. The major compositions of ParaWalk (>75%) are NR and various fillers such as rice husk ash, wood ash, wood fibers and coir. Other chemicals such as processing aids, anti-degradants, activators, accelerators and vulcanizing agent are the minor compositions (<25%).

ParaWalk is one of the alternative materials that can be used for home and garden decoration. It is a new material that has great potential to be launched in both domestic and international markets. The use of ParaWalk not only boosts domestic consumption of NR, but also helps maintain NR price stability, giving great benefits to the country’s economic growth and the involved parties, particularly rubber farmers, wood fiber and coir produces and rubber product manufacturers.